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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,366	10/22/2001	Rainer Koniger	215157US0PCT	9236

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EXAMINER

TARAZANO, DONALD LAWRENCE

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 08/01/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/926,366

Applicant(s)

KONIGER ET AL.

Examiner

D. Lawrence Tarazano

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 13 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 and 17-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-13 and 17-24 is/are rejected.
- 7) ☐ Claim(s) 4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 5, 6, 8, 12-21, 23 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Klun et al. (4,855,184).

3. Klun et al. teach ethylenically unsaturated polyurethane materials coated on the surface of polyester films (unprimed PET) forming a two-layer structure. The examples teach polymers having the claimed glass transition temperatures (Table 1), in which coatings of these materials exist in an “un-cured state” (especially example 1). The un-cured coatings can be removed at this point if the finish is blemished or additional layers may be added to produce a thicker coating (column 22, lines 33+). The resulting dried coatings can then be cured by radiation (column 20, lines 55+ and column 22, lines 45+).

4. The materials can be applied by a variety of coating methods and can be used on a variety of substrates including wood, plastic, and metal. (column 22, lines 27+). Furthermore, the materials can be used in molding and extrusion applications (column 4, lines 7+, column 23, lines 23+).

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TABLE I

Example	Mw	Mn	Pi	Tg (°C.)
1	43,900	1,400	31.4	43-60
2	53,100	2,400	22.2	27-51
3	24,100	2,900	8.3	37-54
4	22,200	2,100	7.9	42-56
5	21,900	2,780	7.9	39-58
8	88,900	6,090	14.6	34-60
9	17,400	2,430	7.2	32-60
10	48,700	5,430	9.0	32-58
11	41,900	5,100	8.2	34-56
12	59,600	6,130	9.9	34-53
13	44,200	6,450	6.9	39-52
14	22,800	3,680	6.2	30-66
16	26,500	4,710	5.6	20-49
17	120,000	7,410	16.2	20-56
C1	—	—	—	34-48
C2	36,500	14,400	2.5	-14-42

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 3, 8, 9, 10, 11, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klun et al. (4,855,184).

7. Klun et al. as discussed above teach coated articles in which the uncured coating has a glass transition temperature above 40 deg as claimed (example 1).

8. Claim 3 is directed to a three-layer structure having a colored interlayer. Klun et al. teach that the clear coating can be used on wood, plastics or metal. They clearly teach that coating

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materials can be applied a primed surface (Comparative examples 1 and 2); furthermore the instant coatings are used as a clear coating on the surface of articles.

9. Since pigmented coating are applied for decorative purposes (e.g. as a transparent or opaque colorant), it would have been obvious to one having ordinary skill in the art at the time the invention was made to have coated the structures taught by Klun et al. using a colorant layer when one was desired to change the color of the article.

10. Regarding the method claims (8-11), the materials taught by Klun et al. can be used in coating applications and they may be used to shaped articles by molding or extrusion methods, in which the formed article is post-cured using irradiation.

11. (Claim 8) It would have been obvious to one having ordinary skill in the art at the time the invention was made to have extruded the materials taught by Klun et al. on to a substrate when a two-layer structure was desired. Extrusion would give an even thickness since the material comes out of a fixed die head.

12. (Claim 9) If a colored layer was desired, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have extruded the additional layer so that the article would have the hard surface layer taught, but have a colored layer for decorative purposes.

13. (Claim 10), As shown in the examples taught by Klun et al. the materials taught can be coated on films the materials can also be coated on wood products. It would have been obvious to make a decorative film or a coated wooded veneer product coated with the materials taught by Klun et al. which could be applied to exposed surfaces to provide a durable decorative finish on articles (e.g. furniture, walls, dashboard etc).

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14. (Claim 11), The materials taught by Klun et al. are used as moldable surface material in which articles can be formed by injection molding (column 23, lines 23+). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have produced multilayer articles using said materials as the surface layer, by injection molding. This would allow the under layers to be made of a less expensive structural material, which might contain structural additives.

15. (Claim 22), It would have been obvious to one having ordinary skill in the art at the time the invention was made to have varied the viscosity of the materials used in the coating composition so that they could be easily applied depending on the method to be used. There does not appear to be any criticality to the range claimed.

Allowable Subject Matter

16. Claim 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art fails to suggest a structure having a layer of polymethyl methacrylate between the coloring interlayer and the outer layer as claimed.

Response to Arguments

17. Applicant's arguments with respect to claims 1-13 and 17-24 have been considered but are moot in view of the new ground(s) of rejection.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. Lawrence Tarazano whose telephone number is (703)-308-2379. The examiner can normally be reached on 8:30 to 6:00 (off every other Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul J Thibodeau can be reached on (703)-309-2367. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-872-9310 for regular communications and (703)-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0661.

D. Lawrence Tarazano
Primary Examiner
Art Unit 1773



dlt
July 25, 2003